



IFW16

RAW SEQUENCE LISTING

DATE: 07/29/2004

PATENT APPLICATION: US/09/648,692B

TIME: 09:38:31

Input Set : A:\17311SEQLIST.TXT

Output Set: N:\CRF4\07292004\I648692B.raw

4 <110> APPLICANT: Dolly, James Oliver
 5 Li, Yan
 6 Chan, C.K.
 7 Aoki, Kei Roger
 9 <120> TITLE OF INVENTION: Activatable Recombinant Neurotoxins
 12 <130> FILE REFERENCE: 17311(BOT)
 14 <140> CURRENT APPLICATION NUMBER: 09/648,692B
 15 <141> CURRENT FILING DATE: 2000-08-25
 17 <150> PRIOR APPLICATION NUMBER: 60/150,710
 18 <151> PRIOR FILING DATE: 1999-08-25
 20 <160> NUMBER OF SEQ ID NOS: 29
 22 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 24 <210> SEQ ID NO: 1
 25 <211> LENGTH: 44
 26 <212> TYPE: DNA
 27 <213> ORGANISM: Artificial Sequence
 29 <220> FEATURE:
 30 <223> OTHER INFORMATION: PCR primer
 32 <400> SEQUENCE: 1
 33 gactggtgga cagcaagtcg accggaagct ttacgacgat gacg
 35 <210> SEQ ID NO: 2
 36 <211> LENGTH: 44
 37 <212> TYPE: DNA
 38 <213> ORGANISM: Artificial Sequence
 40 <220> FEATURE:
 41 <223> OTHER INFORMATION: PCR primer
 43 <400> SEQUENCE: 2
 44 cgtcatcgtc gtaaagcttc cggtcgactt gctgtccacc agtc
 46 <210> SEQ ID NO: 3
 47 <211> LENGTH: 30
 48 <212> TYPE: DNA
 49 <213> ORGANISM: Artificial Sequence
 51 <220> FEATURE:
 52 <223> OTHER INFORMATION: PCR primer
 54 <400> SEQUENCE: 3
 55 aatagatcta gatcattaac agatttagga
 57 <210> SEQ ID NO: 4
 58 <211> LENGTH: 27
 59 <212> TYPE: DNA
 60 <213> ORGANISM: Artificial Sequence
 62 <220> FEATURE:
 63 <223> OTHER INFORMATION: PCR primer
 65 <400> SEQUENCE: 4



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66 ttctaaagat ctatacattt gataact 27
68 <210> SEQ ID NO: 5
69 <211> LENGTH: 27
70 <212> TYPE: DNA
71 <213> ORGANISM: Artificial Sequence
73 <220> FEATURE:
74 <223> OTHER INFORMATION: PCR primer
76 <400> SEQUENCE: 5
77 atgtatagat ctttagaata tcaagta 27
79 <210> SEQ ID NO: 6
80 <211> LENGTH: 45
81 <212> TYPE: DNA
82 <213> ORGANISM: Artificial Sequence
84 <220> FEATURE:
85 <223> OTHER INFORMATION: PCR primer
87 <400> SEQUENCE: 6
88 atcgataagc ttttatcagt cgaccaaca atccagattt ttaga 45
90 <210> SEQ ID NO: 7
91 <211> LENGTH: 65
92 <212> TYPE: PRT
93 <213> ORGANISM: Artificial Sequence
95 <220> FEATURE:
96 <223> OTHER INFORMATION: Engineered Intrachain loop region for C. tetani
97 toxin
99 <400> SEQUENCE: 7
100 Ser Lys Leu Ile Gly Leu Cys Lys Lys Ile Ile Pro Pro Thr Asn Ile
101 1 5 10 15
102 Arg Glu Asn Leu Tyr Asn Arg Thr Ala Gly Glu Lys Leu Tyr Asp Asp
103 20 25 30
104 Asp Asp Lys Asp Arg Trp Gly Ser Ser Arg Ser Leu Thr Asp Leu Gly
105 35 40 45
106 Gly Glu Leu Cys Ile Lys Asn Glu Asp Leu Thr Phe Ile Ala Glu Lys
107 50 55 60
108 Asn
109 65
112 <210> SEQ ID NO: 8
113 <211> LENGTH: 36
114 <212> TYPE: DNA
115 <213> ORGANISM: Artificial Sequence
117 <220> FEATURE:
118 <223> OTHER INFORMATION: PCR Primer
120 <400> SEQUENCE: 8
121 aatagaactg caggagaaaa gctttacgac gatgac 36
123 <210> SEQ ID NO: 9
124 <211> LENGTH: 36
125 <212> TYPE: DNA
126 <213> ORGANISM: Artificial Sequence
128 <220> FEATURE:
129 <223> OTHER INFORMATION: PCR Primer

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131 <400> SEQUENCE: 9
132 gtcacgctcg taaagctttt ctctgcagc tctatt 36
134 <210> SEQ ID NO: 10
135 <211> LENGTH: 4017
136 <212> TYPE: DNA
137 <213> ORGANISM: Clostridium botulinum
139 <400> SEQUENCE: 10
140 gaattcaagt agtagataat aaaaataatg ccacagattt ttattattaa taatgatata 60
141 tttatctcta actgtttaac ttttaacttat aacaatgtaa atatatattt gtctataaaa 120
142 aatcaagatt acaattgggt tatatgtgat cttaatcatg atataccaaa aaagtcatat 180
143 ctatggatat taaaaaatat ataaatttaa aattaggaga tgctgtatat gccaaaaatt 240
144 aatagtttta attataatga tctgtttaat gatagaacaa ttttatatat taaaccaggc 300
145 ggttgctcaag aattttataa atcattttaat attatgaaaa atatttggtat aattccagag 360
146 agaaatgtaa ttggtacaac cccccaagat tttcatcgc ctacttcatt aaaaaatgga 420
147 gatagtagtt attatgaccc taattattta caaagtgatg aagaaaagga tagattttta 480
148 aaaatagtca caaaaatatt taatagaata aataataatc tttcaggagg gattttatta 540
149 gaagaactgt caaaagctaa tccatattta gggaaatgata atactccaga taatcaattc 600
150 catattgggtg atgcatcagc agttgagatt aaattctcaa atggtagcca agacatacta 660
151 ttacctaattg ttattataat gggagcagag cctgatttat ttgaaactaa cagttccaat 720
152 atttctctaa gaaataatta tatgccaaagc aatcacggtt ttggatcaat agctatagta 780
153 acattctcac ctgaatattc ttttagattt aatgataatt gtatgaatga atttattcaa 840
154 gatcctgctc ttacattaat gcatgaatta atacattcat tacatggact atatggggt 900
155 aaagggatta ctacaaagta tactataaca caaaaacaaa atcccctaata acaaatata 960
156 agagggtaca atattgaaga attcttaact tttggaggta ctgattttaa cattattact 1020
157 agtgctcagt ccaatgatat ctataactaat ctctagctg attataaaaa aatagcgtct 1080
158 aaacttagca aagtacaagt atctaatacca ctacttaate cttataaaga tgtttttgaa 1140
159 gcaaagtatg gattagataa agatgctagc ggaatttatt cggtaaatat aaacaaattt 1200
160 aatgatattt ttaaaaaatt atacagcttt acggaatttg atttacgaac taaatttcaa 1260
161 gttaaatgta ggcaaactta tattggacag tataataact tcaaactttc aaacttggtta 1320
162 aatgattcta tttataatat atcagaaggc tataatataa ataattttaa ggtaaatttt 1380
163 agaggacaga atgcaaattt aaatcctaga attattacac caattacagg tagaggacta 1440
164 gtaaaaaaaaa tcattagatt ttgtaaaaat attgtttctg taaaaggcat aaggaaatca 1500
165 atatgtatcg aaataaataa tgggtgagtta ttttttgtgg cttccgagaa tagttataat 1560
166 gatgataata taaatactcc taaagaaatt gacgatacag taacttcaa taataattat 1620
167 gaaaatgatt tagatcaggt tatttttaa tttaatagtg aatcagcacc tggactttca 1680
168 gatgaaaaat taaatttaac tatccaaaat gatgcttata taccaaaata tgattctaata 1740
169 ggaacaagtg atatagaaca acatgatggt aatgaactta atgtattttt ctatttagat 1800
170 gcacagaaag tgcccgaagg tgaaaataat gtcaatctca cctcttcaat tgatacagca 1860
171 ttattagaac aacctaaaat atatacattt tttcatcag aatttattaa taatgtcaat 1920
172 aaacctgtgc aagcagcatt atttgtaagc tggatacaac aagtgttagt agattttact 1980
173 actgaagcta accaaaaaag tactgttgat aaaattgcag atatttctat agttgttcca 2040
174 tatataggtc ttgcttttaa tataggaaat gaagcacaaa aaggaaattt taaagatgca 2100
175 cttgaattat taggagcagg tattttatta gaatttgaac ccgagctttt aattcctaca 2160
176 attttagtat tcacgataaa atctttttta ggttcatctg ataataaaaa taaagttatt 2220
177 aaagcaataa ataatgcatt gaaagaaaga gatgaaaaat ggaaagaagt atatagtttt 2280
178 atagtatcga attggatgac taaaattaat acacaattta ataaaagaaa agaacaatg 2340
179 tatcaagctt taaaaaatca agtaaatgca attaaaacaa taatagaatc taagtataat 2400
180 agttatactt tagaggaaaa aaatgagctt acaataaat atgatattaa gcaaatagaa 2460
181 aatgaactta atcaaaaggt ttctatagca atgaataata tagacaggtt ctttaactgaa 2520

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182 agttctatat cctatttaat gaaaataata aatgaagtaa aaattaataa attaagagaa 2580
183 tatgatgaga atgtcaaaac gtatttattg aattatatta tacaacatgg atcaatcttg 2640
184 ggagagagtc agcaagaact aaattctatg gtaactgata ccctaaataa tagtattcct 2700
185 tttaagcttt cttcttatac agatgataaa attttaattt catattttta taaattcttt 2760
186 aagagaatta aaagtagttc agtttttaaat atgagatata aaaatgataa atacgtagat 2820
187 acttcaggat atgattcaaa tataaatatt aatggagatg tatataaata tccaactaat 2880
188 aaaaatcaat ttggaatata taatgataaa cttagtgaag ttaatatatc tcaaaatgat 2940
189 tacattatat atgataataa atataaaaaa tttagtatta gtttttgggt aagaattcct 3000
190 aactatgata ataagatagt aaatgttaat aatgaatata ctataataaa ttgtatgaga 3060
191 gataataatt caggatggaa agtatctctt aatcataatg aaataatttg gacattcgaa 3120
192 gataatcgag gaattaatca aaaattagca ttttaactatg gtaacgcaaa tggattttct 3180
193 gattatataa ataagtggat ttttgtaact ataactaatg atagattagg agattctaaa 3240
194 ctttatatta atggaaattt aatagatcaa aaatcaattt taaatttagg taatattcat 3300
195 gttagtgaca atatatattt taaaatagtt aattgtagtt atacaagata tattggtatt 3360
196 agatatttta atatttttga taaagaatta gatgaaacag aaattcaaac tttatatagc 3420
197 aatgaaccta atacaaatat tttgaaggat ttttggggaa attatttgct ttatgacaaa 3480
198 gaatactatt tattaatgt gttaaaacca aataacttta ttgataggag aaaagattct 3540
199 actttaagca ttaataatat aagaagcact attcttttag ctaatagatt atatagtgga 3600
200 ataaaagtta aaatacaaag agttaataat agtagtacta acgataatct tgtagaaaag 3660
201 aatgatcagg tatatattaa tttttagacc agcaaaaactc acttatttcc attatatgct 3720
202 gatacagcta ccacaaataa agagaaaaca ataaaaatat catcatctgg caatagattt 3780
203 aatcaagtag tagttatgaa ttcagtagga aattgtacaa tgaattttta aaataataat 3840
204 ggaaataata ttgggttggt aggtttcaag gcagatactg tcgttgctag tacttggtat 3900
205 tatacacata tgagagatca tacaacagc aatggatggt tttggaactt tatttctgaa 3960
206 gaacatggat ggcaagaaaa ataaaaatta gattaaacgg ctaaagtcac aaattcc 4017
208 <210> SEQ ID NO: 11
209 <211> LENGTH: 37
210 <212> TYPE: DNA
211 <213> ORGANISM: Artificial Sequence
213 <220> FEATURE:
214 <223> OTHER INFORMATION: PCR Primer
216 <400> SEQUENCE: 11
217 cccggatccc caaaaattaa tagttttaat tataatg 37
219 <210> SEQ ID NO: 12
220 <211> LENGTH: 36
221 <212> TYPE: DNA
222 <213> ORGANISM: Artificial Sequence
224 <220> FEATURE:
225 <223> OTHER INFORMATION: PCR Primer
227 <400> SEQUENCE: 12
228 cccctgcagt catttttctt gccatccatg ttcttc 36
230 <210> SEQ ID NO: 13
231 <211> LENGTH: 31
232 <212> TYPE: DNA
233 <213> ORGANISM: Artificial Sequence
235 <220> FEATURE:
236 <223> OTHER INFORMATION: PCR Primer
238 <400> SEQUENCE: 13
239 cagttaatac attcattaca tggactatat g 31

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Input Set : A:\17311SEQLIST.TXT

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241 <210> SEQ ID NO: 14
242 <211> LENGTH: 26
243 <212> TYPE: DNA
244 <213> ORGANISM: Artificial Sequence
246 <220> FEATURE:
247 <223> OTHER INFORMATION: PCR Primer
249 <400> SEQUENCE: 14
250 atgcattaat gtaagagcag gatctt 26
252 <210> SEQ ID NO: 15
253 <211> LENGTH: 5
254 <212> TYPE: PRT
255 <213> ORGANISM: Artificial Sequence
257 <220> FEATURE:
258 <223> OTHER INFORMATION: Protease cleavage site
260 <400> SEQUENCE: 15
261 Asp Asp Asp Asp Lys
262 1 5
265 <210> SEQ ID NO: 16
266 <211> LENGTH: 8
267 <212> TYPE: PRT
268 <213> ORGANISM: Artificial Sequence
270 <220> FEATURE:
271 <223> OTHER INFORMATION: Protease cleavage site
273 <400> SEQUENCE: 16
274 Leu Glu Val Leu Phe Gln Gly Pro
275 1 5
278 <210> SEQ ID NO: 17
279 <211> LENGTH: 5
280 <212> TYPE: PRT
281 <213> ORGANISM: Clostridium species
283 <220> FEATURE:
284 <221> NAME/KEY: ZN_FING
285 <222> LOCATION: (1)...(5)
286 <223> OTHER INFORMATION: Zinc finger
288 <221> NAME/KEY: SITE
289 <222> LOCATION: (3)...(4)
290 <223> OTHER INFORMATION: Xaa=any amino acid
W--> 292 <400> 17
W--> 293 His Glu Xaa Xaa His
294 1 5
297 <210> SEQ ID NO: 18
298 <211> LENGTH: 51
299 <212> TYPE: DNA
300 <213> ORGANISM: Artificial Sequence
302 <220> FEATURE:
303 <223> OTHER INFORMATION: Linker
305 <400> SEQUENCE: 18
306 ggagaaaagc ttacgacga tgacgataag gatcgatggg gatcctctag a 51
308 <210> SEQ ID NO: 19

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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 07/29/2004
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:17; Xaa Pos. 3,4
Seq#:22; Xaa Pos. 2,3
Seq#:23; Xaa Pos. 2,3,5

VERIFICATION SUMMARY

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Input Set : A:\17311SEQLIST.TXT

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L:292 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:17
 L:293 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
 L:354 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
 L:358 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:22
 L:359 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0
 L:371 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
 L:375 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:23
 L:379 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:23
 L:380 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0